Abstract

In a multi-band radio terminal apparatus, even when communication frequency bands are switched, a reception intermediate frequency is selected to be equal to each other in the respective different communication frequency bands. The circuit arrangements of this multi-band radio terminal apparatus succeeding to the intermediate frequency signal circuit state are commonly used in the respective communication frequency bands. A local oscillator signal is produced by a voltage-controlled oscillator, a phase-locked loop, and a doubler, such that a communication is established within a plurality of communication frequency bands, the transmission/reception frequency intervals of which are different from each other. A mixer for reception system and a mixer for a transmission system are commonly used to convert the frequency of the local oscillator signal into a frequency existing between the communication frequency and the intermediate frequency.